

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellants : John Herbert Stevens et al.
Title: **SYSTEM AND METHOD FOR AUTOMATIC SWITCHING TO
INTERACTIVE APPLICATION DURING TELEVISION PROGRAM
BREAKS**
Serial No.: 10/020,045
Filed: December 13, 2001
Examiner: Annan Q. Shang
Art Unit: 2424

APPEAL BRIEF

**Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450**

Sir:

In response to the final Office Action dated September 4, 2008, and further to the Notice of Appeal filed on March 4, 2009 and the Petition to Revive which is being filed herewith, Appellants hereby submit an Appeal Brief in accordance with 37 C.F.R. §41.37 for the above-referenced application.

Appellants do not request an oral hearing.

I. Real Party in Interest

The real party in interest is Thomson Licensing LLC.

II. Related Appeals and Interferences

There are no prior or pending appeals, interferences, or judicial proceedings known to Appellants, the Appellants' legal representative, or assignee which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. Status of Claims

Claims 1-17 and 19-22 are pending in this application, and are rejected. Claim 18 is cancelled. The rejection of claims 1-17 and 19-22 is being appealed.

IV. Status of Amendments

No amendment subsequent to the final rejection of September 4, 2008 has been filed.

V. Summary of Claimed Subject Matter

Independent claim 1 defines a system for automatically switching to an interactive application during a commercial break in video programming (see, for example, page 3, lines 23-24) comprising:

- an interactive application module capable of executing an interactive application program and generating output data (see, for example, page 4, lines 10-11);

- a video program module that generates a video program signal (see, for example, page 4, lines 11-12);

- an input module for entering user input commands into the interactive application module (see, for example, page 4, lines 12-13);

- a break detection module adapted to detect a commercial break in the video program signal and generate a break beginning signal (see, for example, page 4, lines 13-14);

- a display module having a primary display area capable of receiving the video program signal and the interactive application output data and displaying a primary

display image corresponding to either the video program signal or the interactive application output data (see, for example, page 4, lines 14-18); and

a switching module that switches the primary display image to the interactive application output data upon receiving the break beginning signal so that upon detecting the beginning of a commercial break, the interactive application output data is automatically presented in the primary display area (see, for example, page 4, lines 18-21), wherein

upon the activation of a second interactive application, said system automatically saves a user's progress in the operation of said interactive program in a memory as to allow the user to use a second interactive application (see, for example, page 5, lines 5-11), and

restoring said user's progress of said interactive program by accessing said memory to retrieve information corresponding to said user's progress (see, for example, page 5, lines 14-17)

automatically switching back to the display of said video program at the end of said commercial break unless said user enables an override command at the time of said switching operation as to continue the operation of said interactive application until said interactive application is terminated (see, for example, page 3, line 26 to page 4, line 3)

at the time said interactive application is terminated, said system automatically saves said user's progress in the operation of said interactive application as to resume the display of said video program in said primary display area (see, for example, page 5, lines 12-14), and

received information corresponding to said video program is stored where the video program stored corresponds from the period when said interactive application and said second interactive application is being used after said override command is performed until said interactive applications is terminated (see, for example, page 14, line 3 to page 15, line 17), and

playing back said stored information in said primary area, when said interactive applications are terminated, as to drop at least one frame of video from said stored information until said video program can be presented in real time only when the operation of said interactive application lasts longer than the period of time

corresponding to said beginning of said commercial break and the end of said commercial break (see, for example, page 15, line 10 to page 16, line 5).

Independent claim 17 defines a method of executing an interactive application program during a commercial break (see, for example, page 6, lines 4-5) comprising the steps of:

- providing a video program module which generates a video program signal (see, for example, page 6, lines 6-7);

- providing an interactive application module adapted to receive user input commands and generate output data according to an interactive application program(see, for example, page 6, lines 7-8);

- detecting a commercial break in the video program signal (see, for example, page 6, lines 8-10);

- presenting the video program in a primary display area of a display until the beginning of the commercial break is detected (see, for example, page 6, lines 10-11);

- displaying the interactive application in the primary display area until the end of said commercial break, where said video program is automatically resumed to be displayed in said primary display area (see, for example, page 6, lines 13-16), except when said user enters in an override command at the time of said commercial break whereby said interactive application is displayed in the primary display area until said interactive application is terminated (see, for example, page 3, line 26 to page 4, line 3), wherein

- received information corresponding to said video program is stored where the video program being stored corresponds starts from the period when said interactive application is being used after said override command and said storing ends when said interactive application is terminated (see, for example, page 14, line 3 to page 15, line 17), and

- playing back said stored information in said primary area, when said interactive application is terminated, as to drop at least one frame of video from said stored information until said video program can be presented in real time (see, for example, page 15, line 24 to page 16, line 5).

Dependent claim 19 further defines claim 17, and states: wherein the interactive application module comprises: a program memory for storing the interactive application program (see, for example, page 6, lines 17-18); a central processing unit which executes the interactive application program in accordance to the user input commands (see, for example, page 6, lines 18-20); an input command interface for receiving the user input commands from an input module and transferring the user input commands to the central processing unit (see, for example, page 6, lines 20-21); a memory for storing a user's point of progress in executing the interactive application program (see, for example, page 6, lines 21-22); a data output means for outputting image and sound data in accordance with the execution of the interactive application program (see, for example, page 6, lines 23-24).

Dependent claim 20 further defines claim 19, and states: further comprising the step of automatically storing a user's point of progress in executing the interactive application program in the memory when the television program is presented in the primary display area (see, for example, page 6, line 25 to page 7, line 1), wherein execution of the interactive application program is resumed from the user's stored point of progress in the pause memory when the interactive application is presented in the primary display area (see, for example, page 7, lines 1-4).

Dependent claim 21 further defines claim 19, and states: wherein interactive application programs are downloaded to and stored locally in the program memory (see, for example, page 7, lines 5-6).

Dependent claim 22 further defines claim 17, and states: wherein the display is a television or computer monitor with picture-in-picture capabilities having a secondary display area in addition to a primary display area (see, for example, page 7, lines 6-8), wherein the television program is presented in the primary display area and the interactive application displayed in the secondary display area until a commercial break is detected (see, for example, page 7, lines 8-10), whereupon detection of the beginning of a commercial break the interactive application is presented in the primary display area and the television program is displayed in the secondary display area until the end

of the commercial break is detected (see, for example, page 7, lines 1-12), whereupon detection of the end of the commercial break the television program is presented in the primary display area and the interactive application is displayed in the secondary display area (see, for example, page 7, lines 13-15).

VI. Grounds of Rejection to be Reviewed on Appeal

The following grounds of rejection are presented for review in this appeal:

A. The rejection of claims 1-16 under 35 U.S.C. §103(a) based on the proposed combination of: U.S. Patent Publication No. 2002/0194593 by Tsuchida (hereinafter, "Tsuchida"), U.S. Patent No. 5,835,717 issued to Karlton et al. (hereinafter, "Karlton"), U.S. Patent No. 7,263,711 issued to Estipona (hereinafter, "Estipona"), and U.S. Patent No. 6,172,712 issued to Beard (hereinafter, "Beard");

B. The rejection of claims 17 and 22 under 35 U.S.C. §103(a) based on the proposed combination of Tsuchida, U.S. Patent Publication No. 2003/0041331 by Allen at al. (hereinafter, "Allen"), and Estipona; and

C. The rejection of claims 19-21 under 35 U.S.C. §103(a) based on the proposed combination of Tsuchida, Allen, Estipona, and Karlton.

VII. Argument

A. Patentability of Claims 1-16

The rejection of claims 1-16 under 35 U.S.C. §103(a) based on the proposed combination of Tsuchida, Karlton, Estipona, and Beard should be reversed for at least the following reasons.

Appellants first note that Claim 1 recites the following features:

"playing back said stored information in said primary area, when said interactive applications are terminated, as to drop at least one frame of video from said stored information until said video program can be presented in real time only when the operation of said interactive application lasts longer than the period of time corresponding to said beginning of said commercial break and the end of said commercial break."

None of the cited references Tsuchida, Karlton, Estipona and Beard, whether taken individually or in combination, discloses or suggests at least the foregoing features of Claim 1.

On page 6 of the final Office Action dated September 4, 2008, the Examiner cites a disclosure of Beard (in combination with the other three references) in which a "TV with a hard disk drive for storing TV program for later playback, where if the initial pause of view is sufficiently brief, the system drops frames to enable the user to catch-up with the in-progress TV after resuming". Hence, using the foregoing disclosure of Beard with the other three references, the Examiner incorrectly concludes that claimed features of the invention are disclosed.

As claimed, Claim 1 recites that "the video program stored corresponds from the period when said interactive application and said second interactive application is being used after said override command is performed until said interactive applications is terminated". This feature claims that the video program is stored and not the contents of the commercial break. In contrast, Beard, in combination with the other three references, discloses that everything is to be recorded, unlike the present invention.

This concept is disclosed in the Summary of the Invention of Beard (see column 3, lines 1-23, where, "The program can be watched at a slightly faster speed from the original analog signal. The time can be further reduced by skipping the commercials, either by providing a manual fast forward function, or by using a commercial detection algorithm.") The reference then provides the implementation as to how the commercial detection will operate, "For example, a one hour television program will typically contain 12 minutes of commercials. By recording a program and replaying it a 2fps faster than the broadcast signal, e.g., at 32 fps for an NTSC signal, and eliminating the commercials, the one-hour program can be watched in under 45 minutes". In this embodiment, it teaches that commercials are to be skipped (presumably by fast forwarding through such commercials). This type of suggestion is different than the present invention, where only the "video program" will be recorded.

The present invention also claims (as indicated above) that when finally playing back the recorded information, "in said primary area, when said interactive application is terminated, as to drop at least one frame of video from said stored information until said video program can be presented in real time *only when the operation of said interactive application lasts longer than the period of time corresponding to said beginning of said commercial break and the end of said commercial break,*" (emphasis added). The invention therefore sets up a condition which restricts when "at least one frame of video" is to be dropped, as when the "operation of said interactive application lasts longer than the period of time corresponding to the beginning of said commercial break and the end of said commercial break". This feature of Claim 1 is neither disclosed nor suggested in the Examiner's combination.

Referring to the operation of Beard (in combination with the other three references), the reference states: "If the initial pause in viewing is sufficiently brief, the stored video replay may be replayed at a faster rate in order to eventually 'catch up' to the incoming analog signal at which point the originally broadcast signal may be watched," (Beard, column 2, lines 61-65). This disclosure of Beard teaches that the programming from the time it is paused to the time it is replayed, that ***all*** of the programming will be sped up until it is "caught up", this includes the fast forwarding of ***all of the broadcast programming and commercials***. This is unlike what is done in Claim 1, where the commercial breaks are not replayed at all, and the only video programming information playback will "drop at least one frame of video from said stored information until said video program can be presented in real time". That is, Beard in combination with the other references, does not suggest this selective type of operation where the only video programming being played back "corresponds from the period when said interactive application and said second interactive application is being used after said override command is performed until said interactive applications is terminated".

Appellants also note that the Examiner's modification of Tsuchida, Karlton, and Beard, with Estipona would create a combination which would change the principles of

operation of the prior art invention being modified as to make the teachings of such references not sufficient to render the claims *prima facie* obvious (In re Ratti, 270 F. 2d 810, 123 USPQ 349 (CCPA 1959). Specifically, when referring to the Estipona reference, the operation of the invention requires the use of triggers which are inputted into a video stream by a broadcaster at a head end, which need to be capable of being read by a television receiver in order to operate as intended (see Estipona column 2, lines 3-59). The triggers are used by a broadcaster to control how a user is to watch a program and interact with enhancements associated with a television program.

Estipona then continues about how a broadcaster inserts a trigger into a broadcast program as to notify a user about the case when, "it may be desirable in some embodiments to remove the possibility of accessing first program enhancements, for example through the enhancement field 64 ... This is keeping with the suggestion of the AVTEF Specification that enhancements should not be automatically made available in ensuring television programs", (Estipona, column 3, lines 40-50). Hence, according to the principles of Estipona, in order to operate, requires the use of triggers which need to be read by a television receiver, and provides a system where a broadcaster would want to control what a user can and cannot do. The reference makes it clear that the use of broadcaster inserted triggers is to be associated with a television program, not the commercials in which a broadcaster would not want a user to skip. Moreover, the triggers are more related to when a program may be ending and a new television program would be beginning (see Estipona, column 4, lines 17-28), and have nothing to do with commercial breaks for a television program.

Appellants point out that the teachings of Estipona require the use of ***broadcaster inserted triggers*** in order to operate, where the broadcaster would use triggers to control how a user watches a television show where such triggers are directed towards television programs themselves, not commercials. Hence, to have the principles of Estipona perform, a receiver (as in Tsuchida, Karlton, and Beard) would require the ability to recognize such triggers, which would change the principle operation of such references not be used, but for the Examiner's combination. Hence, the

teachings of the references are not sufficient to render the claims *prima facie* obvious (see *In re Ratti*, *Ibid*).

Additionally, the Examiner's combination has the problem where the principles Estipona is directed towards the broadcaster controlling what a user may or may not do (i.e., not skip commercials or restricting how long a user is to use an interactive application), while Tsuchida, Karlton, and Beard focus more on providing the user more control (a user can use an interactive application for as long as they want) while the principles of Estipona are restrictive (limits a user's interaction). Such a modification of Tsuchida, Karlton, and Beard with Estipona would render the prior art invention of Tsuchida, Karlton, and Beard unsatisfactory for its intended purpose, reducing the suggestion or motivation to make the Examiner's proposed modification (*In re Gordon*, 733 F. 2d 900, 221 USPQ 1125 (Fed Cir. 1984)).

Accordingly, for at least the reasons presented above, Appellants submit that Claim 1 is patentable over the cited art of record. Additionally, Appellants submit that Claims 2-16 are patentable, as such claims depend from patentable Claim 1. As such, Appellants respectfully request that the Board reverse the rejection of claims 1-16.

B. Patentability of Claims 17 and 22

The rejection of claims 17 and 22 U.S.C. §103(a) based on the proposed combination of Tsuchida, Allen, and Estipona should be reversed for at least the following reasons.

Claim 17 recites:

"received information corresponding to said video program is stored where the video program being stored corresponds starts from the period when said interactive application is being used after said override command and said storing ends when said interactive application is terminated, and

playing back said stored information in said primary area, when said interactive application is terminated, as to drop at least one frame of video from said stored information until said video program can be presented in real time."

This claimed period of when to record programming defined by Claim 17 is neither disclosed nor suggested in the Examiner's recited combination.

Specifically, referring to the Allen reference, (in combination with Tsuchida and Estipona), suggests that one would record everything from the time of an interruption to when a live television signal 402 is resumed (see paragraph 0083). This is unlike the present invention which selectively records only from the time an interactive application is overridden (at the end of a commercial break) to when the interactive application is terminated. That is, the present invention of Claim 17 discriminates what is and is not recorded, versus the system disclosed in Tsuchida, Allen, and Estipona, that would record everything (the commercials of a commercial break and video programming itself). Moreover, the Examiner's system would require a user to fast forward through everything including commercials, which is not performed in the invention of Claim 17.

Additionally, for the reasons given above for Estipona for Claim 1, the addition of triggers need to be added to a broadcast stream in order for the principles of the invention (like an override) to operate with Tsuchida and Allen. Also, the disclosed principles of Tsuchida, and Allen would change with the addition of Estipona as to as to make the teachings of such references not sufficient to render the claims *prima facie* obvious (In re Ratti, *Ibid*). Specifically, when referring to the Estipona reference, the operation of the invention requires the use of triggers which are inputted into a video stream by a broadcaster at a head end, which need to be capable of being read by a television receiver in order to operate as intended (see Estipona column 2, lines 3-59). The triggers are used by a broadcaster to control how a user is to watch a program and interact with enhancements associated with a television program. Tsuchida with Allen, in contrast, are directed towards having a user control what they watch and what they interact with such that a broadcaster control of such applications, with the unnecessary addition of the triggers of Estipona, would result in a system of contrary concepts.

Hence, Appellants assert that the combination of the teachings of Tsuchida, Allen, and Estipona, when combined together, would suggest against the Examiner's

combination and would not present a prima facie rejection under 35 U.S.C. §103(a), (see *In re Ratti*, *Ibid*).

Accordingly, for at least the reasons presented above, Appellants submit that Claim 17 is patentable over the cited art of record. Additionally, Appellants submit that Claim 22 is patentable, as such claim depends from patentable Claim 17. As such, Appellants respectfully request that the Board reverse the rejection of claims 17 and 22.

C. Patentability of Claims 19-21

The rejection of claims 19-21 under 35 U.S.C. §103(a) based on the proposed combination of Tsuchida, Allen, Estipona, and Karlton should be reversed for at least the following reasons.

As noted above for the argumentation for Claims 1 and 17, the addition of Estipona with Tsuchida, Allen, and Karlton, would require the use of broadcaster added triggers at a certain points in programming (at times of a commercial break) for the principles of the Examiner's combined system to operate. It is highly unlikely that a broadcaster would want to add such triggers to allow a user to skip over commercials (as in the present invention). Moreover, as recited above, Estipona suggests that a system where the broadcaster is in control of what a user can do, versus the principles of Tsuchida, Allen, and Karlton, that favor a user over a broadcaster. Hence, the combination of all of these references represents conflicting principles and suggestions, as to render the Examiner's suggestion combination not capable for the purposes of making a prima facie obviousness rejection under 35 U.S.C. §103(a).

Accordingly, for at least the foregoing reasons, Appellants respectfully request that the Board reverse the rejection of claims 19-21.

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Respectfully submitted,

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VIII. Claims Appendix

1. A system for automatically switching to an interactive application during a commercial break in video programming comprising:

an interactive application module capable of executing an interactive application program and generating output data;

a video program module that generates a video program signal; an input module for entering user input commands into the interactive application module;

a break detection module adapted to detect a commercial break in the video program signal and generate a break beginning signal;

a display module having a primary display area capable of receiving the video program signal and the interactive application output data and displaying a primary display image corresponding to either the video program signal or the interactive application output data; and

a switching module that switches the primary display image to the interactive application output data upon receiving the break beginning signal so that upon detecting the beginning of a commercial break, the interactive application output data is automatically presented in the primary display area, wherein

upon the activation of a second interactive application, said system automatically saves a user's progress in the operation of said interactive program in a memory as to allow the user to use a second interactive application, and

restoring said user's progress of said interactive program by accessing said memory to retrieve information corresponding to said user's progress

automatically switching back to the display of said video program at the end of said commercial break unless said user enables an override command at the time of said switching operation as to continue the operation of said interactive application until said interactive application is terminated

at the time said interactive application is terminated, said system automatically saves said user's progress in the operation of said interactive application as to resume the display of said video program in said primary display area, and

received information corresponding to said video program is stored where the video program stored corresponds from the period when said interactive application and

said second interactive application is being used after said override command is performed until said interactive applications is terminated, and

playing back said stored information in said primary area, when said interactive applications are terminated, as to drop at least one frame of video from said stored information until said video program can be presented in real time only when the operation of said interactive application lasts longer than the period of time corresponding to said beginning of said commercial break and the end of said commercial break.

2. The system of claim 1 wherein the break detection module is further adapted to generate a break end signal either automatically upon detecting or determining the end of a television commercial break or manually upon a viewer's election, wherein the switching module switches the primary display image back to the video program signal upon receiving the break end signal so that the video program signal is presented in the primary display area.

3. The system of claim 1 wherein the video program module is a television receiver, a satellite receiver, a VCR, or an HDD receiver.

4. The system of claim 1 wherein the interactive application program is a video game program, a word processor program, a spreadsheet program, or an internet browser program.

5. The system of claim 1 wherein the input module is a keyboard, mouse, or hand-held controller.

6. The system of claim 2 wherein the interactive application module comprises: a program memory for storing the interactive application program; a central processing unit which executes the interactive application program in accordance to the user input commands; an input command interface for receiving the user input commands from the input module and transferring the user input commands to the central processing unit; said memory for storing a user's point of progress in executing the interactive

application program; a data output means for outputting image and sound data in accordance with the execution of the interactive application program.

7. The system of claim 6 wherein a user's point of progress in executing the interactive application program is automatically stored in the memory when the switching module switches the primary display image to the television program signal, wherein execution of the interactive application program is resumed from the user's stored point of progress in the memory when the switching module switches the primary display image back to the interactive application output data.

8. The system of claim 6 wherein the input command interface is an infrared photosensor and the input module is one or more hand held remote controllers which emit infrared signals.

9. The system of claim 6 wherein the program memory is a CD-ROM, magnetic disc, integrated circuit, or hard drive.

10. The system of claim 6 wherein the program memory is a local memory connected to a remote program source that stores a multitude of interactive application programs, wherein the system comprises means to download interactive application programs from the remote program source to the local memory.

11. The system of claim 10 wherein the means to download is connected to the internet.

12. The system of claim 10 wherein the selection and downloading of specific interactive application programs from the remote program source to the internal memory device is controlled by the input commands entered by the user via the input module.

13. The system of claim 1 further comprising means to deactivate the switching module and to manually select either the video program signal or the interactive application output data as the primary display image.

14. The system of claim 1 wherein the display module is a television or a computer monitor having a display screen.

15. The system of claim 14 wherein the primary display area can be the entire display screen of the television or computer monitor or can be an area constituting a majority of the display screen in televisions and computer monitors with picture-in-picture capabilities.

16. The system of claim 1 wherein the display module is a television or computer monitor with picture-in-picture capability having a secondary display area for displaying a secondary display image in addition to the primary display area for presenting the primary display image, wherein the switching module switches the displays of the primary display image and the secondary display image between the television program signal and the interactive application output data so that the television program is presented as the primary display image and the interactive application is displayed as the secondary display image until the beginning of a commercial break is detected, whereupon the detection of the beginning of a commercial break the interactive application output data is presented as the primary display image and the television program signal is displayed as the secondary display image until the end of the commercial break is detected, whereupon the detection of the end of the commercial break the television program signal is presented as the primary display image and the interactive application output data is displayed as the secondary display image.

17. A method of executing an interactive application program during a commercial break comprising the steps of:

- providing a video program module which generates a video program signal;
- providing an interactive application module adapted to receive user input commands and generate output data according to an interactive application program;

detecting a commercial break in the video program signal;
presenting the video program in a primary display area of a display until the beginning of the commercial break is detected;
displaying the interactive application in the primary display area until the end of said commercial break, where said video program is automatically resumed to be displayed in said primary display area, except when said user enters in an override command at the time of said commercial break whereby said interactive application is displayed in the primary display area until said interactive application is terminated, wherein received information corresponding to said video program is stored where the video program being stored corresponds starts from the period when said interactive application is being used after said override command and said storing ends when said interactive application is terminated, and
playing back said stored information in said primary area, when said interactive application is terminated, as to drop at least one frame of video from said stored information until said video program can be presented in real time.

19. The method of claim 17 wherein the interactive application module comprises: a program memory for storing the interactive application program; a central processing unit which executes the interactive application program in accordance to the user input commands; an input command interface for receiving the user input commands from an input module and transferring the user input commands to the central processing unit; a memory for storing a user's point of progress in executing the interactive application program; a data output means for outputting image and sound data in accordance with the execution of the interactive application program.

20. The method of claim 19 further comprising the step of automatically storing a user's point of progress in executing the interactive application program in the memory when the television program is presented in the primary display area, wherein execution of the interactive application program is resumed from the user's stored point of progress in the pause memory when the interactive application is presented in the primary display area.

21. The method of claim 19 wherein interactive application programs are downloaded to and stored locally in the program memory.

22. The method of claim 17 wherein the display is a television or computer monitor with picture-in-picture capabilities having a secondary display area in addition to a primary display area, wherein the television program is presented in the primary display area and the interactive application displayed in the secondary display area until a commercial break is detected, whereupon detection of the beginning of a commercial break the interactive application is presented in the primary display area and the television program is displayed in the secondary display area until the end of the commercial break is detected, whereupon detection of the end of the commercial break the television program is presented in the primary display area and the interactive application is displayed in the secondary display area.

IX. Evidence Appendix

None.

X. Related Proceedings Appendix

None.